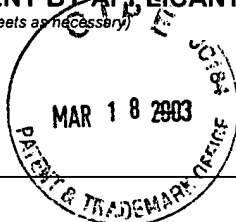


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)



Complete if Known

Application Number	09/945554
Filing Date	August 30, 2001
First Named Inventor	Forbes, Leonard
Group Art Unit	2826
Examiner Name	Dickey, Thomas

Sheet 1 of 5

Attorney Docket No: 1303.028US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
JY	US-2001/0013621	08/01/2001	Kazuo, Nakazato	257	314	12/08/2000
JY	US-2002/0106536	08/08/2002	Lee, Jongho , et al.	428	702	02/02/2001
JY	US-2002/0137250	09/26/2002	Nguyen, B. , et al.	438	53	03/15/2002
JY	US-4,412,902	11/01/1983	Michikami, Osamu , et al.	204	192	06/18/1982
JY	US-4,757,360	07/12/1988	Faraone, Lorenzo , et al.	257	317	07/06/1983
JY	US-4,780,424	10/25/1988	Holler, M.	437	29	09/28/1987
JY	US-5,691,230	11/25/1997	Forbes, L.			
JY	US-5,042,011	08/20/1991	Casper, Stephen L., et al.	365	205	05/22/1989
JY	US-5,071,782	12/10/1991	Mori, Kiyoshi	437	48	06/28/1990
JY	US-5,073,519	12/01/1991	Rodder, Mark	438	269	
TD	US-5,280,205	06/18/1994	Green, Robert S., et al.	307	530	04/16/1992
TD	US-5,350,738	09/27/1994	Hase, Takashi , et al.	505	473	11/27/1992
TD	US-5,399,516	03/21/1995	Bergendahl, A , et al.	437	43	09/21/1992
TD	US-5,497,494	03/05/1996	Combs, J , et al.	395	750	07/23/1993
TD	US-5,498,558	03/12/1996	Kapoor, A	437	43	05/06/1994
TD	US-5,508,544	04/16/1996	Shah, P. L.	257	316	09/27/1994
TD	US-5,600,592	02/04/1997	Atsumi, S. , et al.	365	185.18	05/08/1995
TD	US-5,618,575	04/08/1997	Peter, Gunter	427	8	04/21/1995
TD	US-5,619,642	04/08/1997	Nielsen, M , et al.	395	182.04	12/23/1994
TD	US-5,627,785	05/06/1997	Gilliam, Gary R., et al.	365	189.01	03/15/1996
TD	US-5,677,867	10/14/1997	Hazani, E.	365	185	06/30/1995
TD	US-5,691,230	11/25/1997	Forbes, L.	437	62	09/04/1996
TD	US-5,801,401	09/01/1998	Forbes, L.	257	77	01/29/1997
TD	US-5,852,306	12/22/1998	Forbes, Leonard	257	315	01/29/1997
TD	US-5,880,991	03/09/1999	Hsu, L , et al.	365	182	04/14/1997
TD	US-5,923,056	07/13/1999	Lee, Woo-Hyeong, et al.	257	192	03/12/1998
TD	US-5,936,274	08/10/1999	Forbes, L. , et al.	257	315	07/08/1997
TD	US-5,981,350	11/09/1999	Geusic, J. E., et al.	438	386	05/29/1998
TD	US-5,991,225	11/23/1999	Forbes, L. , et al.	365	230.06	02/27/1998
TD	US-6,025,228	02/15/2000	Ibok, E. , et al.	438	261	11/25/1997
TD	US-6,025,627	02/15/2000	Forbes, L. , et al.	257	321	05/29/1998

EXAMINER

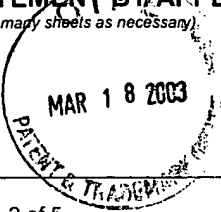
DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)



Complete if Known

Application Number	09/945554
Filing Date	August 30, 2001
First Named Inventor	Forbes, Leonard
Group Art Unit	2826
Examiner Name	Dickey, Thomas

Sheet 2 of 5

Attorney Docket No: 1303.028US1

JB	US-6,031,263	02/29/2000	Forbes, L., et al.	257	315	07/29/1997
JB	US-6,069,380	05/01/2000	Chou, , et al.	257	315	
JB	US-6,124,729	09/26/2000	Noble, W. P., et al.	326	41	02/27/1998
JB	US-6,134,175	10/17/2000	Forbes, L., et al.	365	230.06	08/04/1998
JB	US-6,135,175	10/24/2000	Gaudreault, P., et al.	144	4.1	10/19/1998
JB	US-6,141,238	10/31/2000	Forbes, L., et al.	365	145	08/30/1999
JB	US-6,143,636	11/07/2000	Forbes, L., et al.	438	587	08/20/1998
JB	US-6,163,049	12/19/2000	Bui, N. D.	257	321	10/13/1998
JB	US-6,208,164	03/27/2001	Noble, W. P., et al.	326	41	08/04/1998
JB	US-6,229,175	05/08/2001	Uchida, Hidetsugu	257	315	03/19/1999
JB	US-6,238,976	05/29/2001	Noble, W. P., et al.	438	259	02/27/1998
JB	US-6,246,606	06/12/2001	Forbes, Leonard, et al.	365	185.03	09/02/1999
JB	US-6,249,020	06/19/2001	Forbes, L., et al.	257	315	08/27/1998
JB	US-6,249,460	06/19/2001	Forbes, L., et al.	365	185.28	02/28/2000
JB	US-6,307,775	10/23/2001	Forbes, L., et al.	365	185.01	08/27/1998
JB	US-6,323,844	11/27/2001	Yeh, Fu-Kuo, et al.	345	166	08/11/1997
JB	US-6,351,411	02/26/2002	Forbes, Leonard, et al.	365	182	06/12/2001
JB	US-6,424,001	07/23/2002	Forbes, L., et al.	257	315	02/09/2001

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
--------------------	---------------------	------------------	---	-------	----------	----------------

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JB		AFANAS'EV, V., et al., "Electron energy barriers between (100)Si and ultrathin stacks of SiO ₂ , Al ₂ O ₃ , and ZrO ₂ insulators", <u>Applied Physics Letters</u> , 78(20), (2001), pp. 3073-3075	
JB		ARYA, S., et al., "Conduction Properties of Thin Al ₂ O ₃ Films", <u>Thin Solid Films</u> , 91, (1982), pp. 363-374	
JB		DIPERT, BRIAN, et al., "Flash Memory Goes Mainstream", <u>IEEE Spectrum</u> , 30, (October 1993), pp. 48-52	
JB		EIERDAL, L., et al., "Interaction of oxygen with Ni(110) studied by scanning tunneling microscopy", <u>Surface Science</u> , 312, (1994), pp. 31-53	
JB		ELDRIDGE, J., et al., "Analysis of Ultrathin Oxide Growth on Indium", <u>Thin Solid Films</u> , 12, (1972), pp. 447-451	
JB		ELDRIDGE, J. M., et al., "Growth of Thin PbO Layers on Lead Films", <u>Surface Science</u> , 40, (1973), pp. 512-530	
X			

EXAMINER

[Signature]

DATE CONSIDERED

4/11/03

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

MAR 18 2003
PATENT & TRADEMARK OFFICE

Sheet 3 of 5

Complete if Known

Application Number	09/945554
Filing Date	August 30, 2001
First Named Inventor	Forbes, Leonard
Group Art Unit	2826
Examiner Name	Dickey, Thomas

Attorney Docket No: 1303.028US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
TB		ELDRIDGE, J. , et al., "Measurement of Tunnel Current Density in a Metal-Oxide-Metal System as a Function of Oxide Thickness", <u>Proc. 12th Intern. Conf. on Low Temperature Physics</u> , (1971),pp. 427-428	
TB		GREINER, J. , "Josephson Tunneling Barriers by rf Sputter Etching in an Oxygen Plasma", <u>Journal of Applied Physics</u> , vol. 42, no. 12, (November 1971), pp. 5151-5155	
TB		GREINER, J. , "Oxidation of lead films by rf sputter etching in an oxygen plasma", <u>Journal of Applied Physics</u> , 45(1), (1974),pp. 32-37	
TB		GRIMBOLT, J. , "I. Interaction of Al Films with O ₂ at Low Pressures", <u>Journal of the Electrochemical Society</u> , 129(10), (1982),pp. 2366-2368	
TB		GRIMBOLT, J. , "II. Oxidation of Al Films", <u>Journal of Electrochem Soc.: Solid-State Science and Technology</u> , (1982),pp. 2369-2372	
TB		GUNDLACH, K. , et al., "Logarithmic Conductivity of Al-Al ₂ O ₃ -Al Tunneling Junctions Produced by Plasma and by Thermal Oxidation", <u>Surface Science</u> , 27, (1971),pp. 125-141	
TB		GUO, X. , "High Quality Ultra-thin (1.5 nm) TiO ₂ /Si ₃ N ₄ Gate Dielectric for Deep Sub-micron CMOS Technology", <u>IEDM Technical Digest</u> , (1999),pp. 137-140	
TB		HODGES, D. A., et al., <u>Analysis and Design of Digital Integrated Circuits</u> , McGraw-Hill Book Company, 2nd Edition,(1988),394-396	
TB		HURYCH, Z. , "Influence of Non-Uniform Thickness of Dielectric Layers on Capacitance and Tunnel Currents", <u>Solid-State Electronics</u> , vol. 9, (1966), pp. 967-979	
TB		ITOKAWA, H. , "Determination of Bandgap and Energy Band Alignment for High-Dielectric-Constant Gate Insulators Using High-Resolution X-ray Photoelectron Spectroscopy", <u>Extended Abstracts of the 1999 International Conference on Solid State Devices and Materials</u> , (1999),pp. 158-159	
TB		KIM, H. , "Leakage current and electrical breakdown in metal-organic chemical vapor deposited TiO ₂ dielectrics on silicon substrates", <u>Applied Phys. Lett.</u> , 69(25), (1996),pp. 3860-3862	
TB		KUBASCHEWSKI, O. , et al., <u>Oxidation of Metals and Alloys</u> , Second Edition, Butterworths, London,(1962),pp. 1-3, 5,6, 8-12, 24, 36-39	
TB		KUBASCHEWSKI, O. , et al., <u>Oxidation of Metals and Alloys</u> , Butterworths, London,(1962),pp. 53-63	
TB		KUKLI, K. , "Development of Dielectric Properties of Niobium Oxide, Tantalum Oxide, and Aluminum Oxide Based Nanolayered Materials", <u>Journal of the Electrochemical Society</u> , 148(2), (2001),pp. F35-F41	
TB		KWO, J. , "Properties of high k gate dielectrics Gd ₂ O ₃ and Y ₂ O ₃ for Si", <u>Journal of Applied Physics</u> , 89(7), (2001),pp. 3920-3927	
TB		LUAN, H. , et al., "High Technology Ta ₂ O ₅ Gate Dielectrics with Tox,eq<10A", <u>IEDM</u> , (1999),pp. 141-144	
X			

EXAMINER

DATE CONSIDERED

4/21/02

Substitute Disclosure Statement Form (PTO-1449)

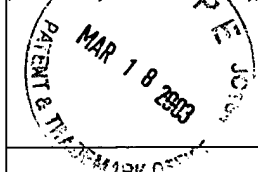
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)



Complete if Known

Application Number	09/945554
Filing Date	August 30, 2001
First Named Inventor	Forbes, Leonard
Group Art Unit	2826
Examiner Name	Dickey, Thomas

Sheet 4 of 5

Attorney Docket No: 1303.028US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Jb		MA, Y. , "Zirconium Oxide Based Gate Dielectrics with equivalents Oxide Thickness of LESS Than 1.0 nm and Performance of Submicron MOSFET using a Nitride Gate Replacement Process", <u>IEDM - Technical Digest</u> , (1999),pp. 149-152	
Jb		MARSHALEK, R. , et al., "Photoresponse Characteristics of Thin-Film Nickel-Nickel Oxide-Nickel Tunneling Junctions", <u>IEEE Journal of Quantum Electronics</u> , QE-19(4), (1983),pp. 749-754	
Jb		MASUOKA, F. , et al., "A 256K Flash EEPROM using Triple Polysilicon Technology", <u>IEEE International Solid-State Circuits Conference, Digest of Technical Papers</u> , (1985),pp. 168-169	
Jb		MASUOKA, F. , et al., "A New Flash EEPROM Cell using Triple Polysilicon Technology", <u>International Electron Devices Meeting, Technical Digest</u> , San Francisco, CA,(1984),pp. 464-467	
Jb		MORI, S. , et al., "Reliable CVD Inter-Poly Dielectrics for Advanced E&EEPROM", <u>Symposium on VLSI Technology, Digest of Technical Papers</u> , (1985),pp. 16-17	
Jb		MULLER, H. , "Electrical and Optical Properties of Sputtered In2O3 Films", <u>Physica Status Solidi</u> , 27(2), (1968),pp.723-731	
Jb		PASHLEY, R. , et al., "Flash Memories: the best of two worlds", <u>IEEE Spectrum</u> , (1989),pp. 30-33	
Jb		POLLACK, S. , et al., "Tunneling Through Gaseous Oxidized Films of Al2O3", <u>Transactions of the Metallurgical Society of AIME</u> , 233, (1965),pp. 497-501	
Jb		QI, W , "MOSCAP and MOSFET characteristics using ZrO2 gate dielectric deposited directly on Si", <u>IEDM - Technical Digest</u> , (1999),pp. 145-148	
Jb		ROBERTSON, J. , "Band offsets of wide-band-gap oxides and implications for future electronic devices", <u>Journal Vac. Sci. Technol. B</u> , 18(3), (2000),pp. 1785-1791	
Jb		ROBERTSON, J. , et al., "Schottky Barrier height of Tantalum oxide, barium strontium titanate, lead titanate, and strontium bismuth tantalate", <u>Applied Physics Letters</u> , vol. 74, no. 8, (02/22/1999),1168-1170	
Jb		SHI, Y. , et al., "Tunneling Leakage Current in Ultrathin (<4 nm) Nitride/Oxide Stack Dielectrics", <u>IEEE Electron Device Letters</u> , 19(10), (1998),pp. 388-390	
Jb		SIMMONS, J. , "Generalized Formula for the Electric Tunnel Effect between Similiar Electrodes Separated by a Thin Insulating Film", <u>Journal of Applied Physics</u> , 34(6), (1963),pp. 1793-1803	
Jb		SWALIN, R. , "Equilibrium between Phases of Variable Composition", <u>Thermodynamics of Solids</u> , 2nd Edition, (1972),pp. 165-180	
Jb		SZE, S. , <u>Physics of Semiconductor Devices</u> , Second Edition, John Wiley & Sons, New York,(1981),pp. 553-556	
J			

EXAMINER

DATE CONSIDERED

4/21/02

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

MAR 18 2003
PATENT & TRADEMARK OFFICE

Complete if Known

Application Number	09/945554
Filing Date	August 30, 2001
First Named Inventor	Forbes, Leonard
Group Art Unit	2826
Examiner Name	Dickey, Thomas

Sheet 5 of 5

Attorney Docket No: 1303.028US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JV		YAN, J. , et al., "Structural and electrical characterization of TiO2 grown from titanium tetrakis-isopropoxide (TTIP) and TTIP/H2O ambients", <u>Journal Vac. Sci. Technol. B</u> , 14(3), (1996), pp. 1706-1711	

EXAMINER

DATE CONSIDERED

4/21/03